

Titles of most frequently occurring classifications of patents returned  
from a search of 10583717 on Mar 25, 2009

- 14 704/226 (7 OR, 7 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 . SPEECH SIGNAL PROCESSING  
704/201 .. For storage or transmission  
704/226 ... Noise
- 9 704/233 (4 OR, 5 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 . SPEECH SIGNAL PROCESSING  
704/231 .. Recognition  
704/233 ... Detect speech in noise
- 8 704/219 (1 OR, 7 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 . SPEECH SIGNAL PROCESSING  
704/201 .. For storage or transmission  
704/219 ... Linear prediction
- 7 704/221 (4 OR, 3 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 . SPEECH SIGNAL PROCESSING  
704/201 .. For storage or transmission  
704/221 ... Pattern matching vocoders
- 6 704/E19.006 (0 OR, 6 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/E19.001 . SPEECH OR AUDIO SIGNAL ANALYSIS- SYNTHESIS TECHNIQUES FOR  
REDUNDANCY REDUCTION, E.G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO  
SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E.G., SOURCE-FILTER  
MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)  
704/E19.006 .. Comfort noise, silence coding (EPO)
- 6 704/E21.004 (0 OR, 6 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/E21.001 . MODIFICATION OF AT LEAST ONE CHARACTERISTIC OF SPEECH WAVES  
(EPO)  
704/E21.002 .. Speech enhancement, e.g., noise reduction, echo  
cancellation, etc. (EPO)  
704/E21.003 ... Applications (EPO)  
704/E21.004 .... Speech corrupted by noise (EPO)
- 5 704/229 (0 OR, 5 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/200 . SPEECH SIGNAL PROCESSING  
704/201 .. For storage or transmission  
704/229 ... Adaptive bit allocation
- 5 704/E19.041 (0 OR, 5 XR)  
Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION  
704/E19.001 . SPEECH OR AUDIO SIGNAL ANALYSIS- SYNTHESIS TECHNIQUES FOR  
REDUNDANCY REDUCTION, E.G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO

SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E. G., SOURCE-FILTER MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)

704/ E19.023 .. Using predictive techniques; codecs based on source-filter modelization (EPO)

704/ E19.039 ... Details of speech and audio coders (EPO)

704/ E19.04 .... Vocoder architecture (EPO)

704/ E19.041 ..... Vocoders using multiple modes (EPO)

5 381/ 94.3 (4 OR, 1 XR)

Class 381 ELECTRICAL AUDIO SIGNAL PROCESSING SYSTEMS AND DEVICES

381/ 94.1 . NOISE OR DISTORTION SUPPRESSION

381/ 94.2 .. Spectral adjustment

381/ 94.3 ... In multiple frequency bands

4 455/ 570 (2 OR, 2 XR)

Class 455 TELECOMMUNICATIONS

455/ 73 . TRANSMITTER AND RECEIVER AT SAME STATION (E. G., TRANSCEIVER)

455/ 550.1 .. Radiotelephone equipment detail

455/ 569.1 ... Hands-free or loudspeaking arrangement

455/ 570 .... Noise suppression or echo cancellation

3 704/ E19.035 (0 OR, 3 XR)

Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION

704/ E19.001 . SPEECH OR AUDIO SIGNAL ANALYSIS-SYNTHESIS TECHNIQUES FOR REDUNDANCY REDUCTION, E. G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E. G., SOURCE-FILTER MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)

704/ E19.023 .. Using predictive techniques; codecs based on source-filter modelization (EPO)

704/ E19.026 ... Determination or coding of the excitation function; determination or coding of the long-term prediction characteristics (EPO)

704/ E19.035 .... Determination or coding of a code excitation; code excited linear prediction (CELP) vocoders (EPO)

3 379/ 386 (1 OR, 2 XR)

Class 379 TELEPHONIC COMMUNICATIONS

379/ 350 . SUPERVISORY OR CONTROL LINE SIGNALING

379/ 386 .. Signal receiver (e. g., tone decoder)

3 379/ 283 (0 OR, 3 XR)

Class 379 TELEPHONIC COMMUNICATIONS

379/ 242 . CENTRALIZED SWITCHING SYSTEM

379/ 258 .. Switching controlled in response to called station addressing signal

379/ 268 ... Having shared or common switching control

379/ 280 .... Including registering or storing device for call address signal

379/ 282 ..... Voice frequency receiver

379/ 283 ..... Dual tone multifrequency (DTMF) receiver

3 379/ 406.08 (3 OR, 0 XR)

Class 379 TELEPHONIC COMMUNICATIONS

379/ 406.01 . ECHO CANCELLATION OR SUPPRESSION

379/ 406.06 .. Using digital signal processing

379/ 406.08 ... Adaptive filtering

3 370/ 290 (0 OR, 3 XR)

Class 370 MULTIPLEX COMMUNICATIONS

370/ 276 . DUPLEX

370/ 282 .. Transmit/receive interaction control

370/ 286 ... Echo suppression or cancellation

370/ 290 .... Using a particular adaptive filter

- 3 704/ 214 (1 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 211 ... Time  
 704/ 214 .... Voiced or unvoiced
- 3 704/ 224 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 224 ... Normalizing
- 3 704/ E19. 043 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ E19. 001 . SPEECH OR AUDIO SIGNAL ANALYSIS- SYNTHESIS TECHNIQUES FOR  
 REDUNDANCY REDUCTION, E. G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO  
 SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E. G., SOURCE-FILTER  
 MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)  
 704/ E19. 023 .. Using predictive techniques; codecs based on source-filter  
 modelization (EPO)  
 704/ E19. 039 ... Details of speech and audio coders (EPO)  
 704/ E19. 04 .... Vocoder architecture (EPO)  
 704/ E19. 041 ..... Vocoder using multiple modes (EPO)  
 704/ E19. 043 ..... Mode decision, i.e., based on audio signal content  
 versus external parameter (EPO)
- 3 704/ E19. 044 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ E19. 001 . SPEECH OR AUDIO SIGNAL ANALYSIS- SYNTHESIS TECHNIQUES FOR  
 REDUNDANCY REDUCTION, E. G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO  
 SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E. G., SOURCE-FILTER  
 MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)  
 704/ E19. 023 .. Using predictive techniques; codecs based on source-filter  
 modelization (EPO)  
 704/ E19. 039 ... Details of speech and audio coders (EPO)  
 704/ E19. 04 .... Vocoder architecture (EPO)  
 704/ E19. 041 ..... Vocoder using multiple modes (EPO)  
 704/ E19. 044 ..... Variable rate or variable quality codecs, e.g.,  
 scalable representation encoding, etc. (EPO)
- 3 704/ E19. 003 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ E19. 001 . SPEECH OR AUDIO SIGNAL ANALYSIS- SYNTHESIS TECHNIQUES FOR  
 REDUNDANCY REDUCTION, E. G., IN VOCODERS, ETC.; CODING OR DECODING OF SPEECH OR AUDIO  
 SIGNALS; COMPRESSION OR EXPANSION OF SPEECH OR AUDIO SIGNALS, E. G., SOURCE-FILTER  
 MODELS, PSYCHOACOUSTIC ANALYSIS, ETC. (EPO)  
 704/ E19. 003 .. Correction of errors induced by the transmission channel,  
 if related to the coding (EPO)
- 3 704/ 200. 1 (2 OR, 1 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 200. 1 .. Psychoacoustic

- 3 704/ E15. 039 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ E15. 001 . SPEECH RECOGNITION (EPO)  
 704/ E15. 039 .. Speech recognition techniques for robustness in adverse  
 environments, e.g., in noise, of stress induced speech, etc. (EPO)
- 3 704/ 225 (0 OR, 3 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 225 ... Gain control
- 2 704/ 201 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission
- 2 704/ 222 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 221 ... Pattern matching vocoders  
 704/ 222 .... Vector quantization
- 2 704/ 223 (2 OR, 0 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 221 ... Pattern matching vocoders  
 704/ 223 .... Excitation patterns
- 2 379/ 388. 04 (0 OR, 2 XR)  
 Class 379 TELEPHONIC COMMUNICATIONS  
 379/ 387. 01 . SUBSTATION OR TERMINAL CIRCUITRY  
 379/ 388. 01 .. For loudspeaking terminal  
 379/ 388. 04 ... Voice control of transmission direction
- 2 704/ E21. 001 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ E21. 001 . MODIFICATION OF AT LEAST ONE CHARACTERISTIC OF SPEECH WAVES  
 (EPO)
- 2 381/ 320 (1 OR, 1 XR)  
 Class 381 ELECTRICAL AUDIO SIGNAL PROCESSING SYSTEMS AND DEVICES  
 381/ 312 . HEARING AIDS, ELECTRICAL  
 381/ 320 .. Spectral control
- 2 704/ 227 (0 OR, 2 XR)  
 Class 704 DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS,  
 LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/ DECOMPRESSION  
 704/ 200 . SPEECH SIGNAL PROCESSING  
 704/ 201 .. For storage or transmission  
 704/ 226 ... Noise  
 704/ 227 .... Pretransmission